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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/584,316 | 06/23/2006 | Toshihiro Oki | 292920US0PCT | 9808 |
| 22850 7590 01/28/2010 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | | |
| EXAMINER CHEUNG, WILLIAM K | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 1796 | | | | |
| NOTIFICATION DATE | | DELIVERY MODE | | |
| 01/28/2010 | | ELECTRONIC | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/584,316

Applicant(s)

OKI ET AL.

Examiner

WILLIAM K. CHEUNG

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/C)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date: _____

DETAILED ACTION

Request for Continued Examination

1. The request filed on December 22, 2009 for a Request for Continued Examination (RCE) under 37 CFR 1.53(d) based on parent Application No. 10/584,316 is acceptable and a RCE has been established. An action on the RCE follows. Claims 1-15 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

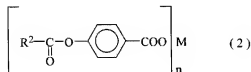
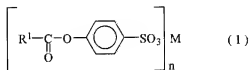
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Baeck et al. (EP 0 297 673) for the reasons adequately set forth from paragraph 4 of the office action of August 20, 2009, as affirmed by Jayawant (US 3,860,694).

Claim 1. (currently amended) A softening detergent composition comprising:

- (a) 1 to 30% by mass of a clay mineral;
- (b) 0.5 to 20% by mass of a ~~compound capable of releasing hydrogen peroxide in water~~ sodium carbonate-hydrogen peroxide adduct;
- (c) 0.1 to 20% by mass of a compound represented by the following general formula (1) or (2):



wherein R¹ is an alkyl group having 4 to 13 carbon atoms; R² is an alkyl group having 5 to 13 carbon atoms; M is a hydrogen atom, or an alkali metal atom, an alkaline earth metal atom, an ammonium or an alkanolamine, with proviso that when M is an alkaline earth metal atom, n is 2, and that when M is an alkali metal atom, an ammonium or an alkanolamine, n is 1, or a combination of both; and

wherein a mass ratio of the component (b) to the component (c) [component (b)/component (c)] is from 3/4 to 20/1.

(d) 0.4 to 20 wt. % of a salt of a fatty acid; and

10 to 60% by mass of a component corresponding to a surfactant as prescribed in

JIS K 3362:1998,

wherein a mass ratio of the component (b) to the component (c) [component

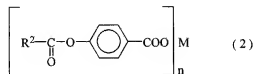
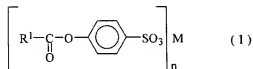
(b)/component (c)] is from 3/4 to 20/1.

6. (currently amended) A method of enhancing softening effect of a clay mineral against a fibrous manufactured article, comprising the step of applying to the fibrous manufactured article,

(a) a clay mineral;

(b) ~~a sodium carbonate-hydrogen peroxide adduct~~ ~~a compound capable of releasing hydrogen peroxide in water~~; and

(c) a compound represented by the following general formula (1) or (2):



wherein R¹ is an alkyl group having 4 to 13 carbon atoms; R² is an alkyl group having 5 to 13 carbon atoms; M is a hydrogen atom, or an alkali metal atom, an alkaline earth

metal atom, an ammonium or an alkanolamine, with proviso that when M is an alkaline earth metal atom, n is 2, and that when M is an alkali metal atom, an ammonium or an alkanolamine, n is 1,
or a combination of both; and
(d) a salt of a fatty acid,
in mass ratios satisfying:
the component (b)/the component (c) = 3/4 to 20/1, and
the component (a)/the component (c) = 35/1 to 1/5.

Baeck et al. (page 7-8, Table, Composition II) disclose a composition that meets all the features of claims 1-8. Regarding claims 6-8, Baeck et al. (abstract) clearly teach using the disclosed composition as a fabric softening materials. Applicants must recognize that fabrics are inherently fibrous materials. Regarding the "coated granule" feature of claim 13, applicants must recognize that Baeck et al. (page 8, Table) clearly disclose the use of sodium sulfate and Hectorite clay in the amount as required by the claims. Since Baeck et al. have taught the composition as claimed, the examiner has a reasonable basis to believe that the claim 13 has been met by Baeck et al. Applicants must recognize that the claimed invention relates to "a composition", where the coating itself carries very little weight in the patentability of the claimed invention.

Regarding the claimed "water" and the amounts, Baeck et al. (page 10, Table) clearly disclose composition having the amount of water as claimed.

Regarding the claimed "sodium carbonate-hydrogen peroxide adduct", Baeck et al. (page 4, line 39-41) disclose it is suitable to include alkali-metal percarbonate into the disclosed composition. Further, Baeck et al. (page 4, line 42) clearly indicate that

sodium is the alkali-metal. Since sodium percarbonate is basically same as (or considered as) an adduct of sodium carbonate-hydrogen peroxide which is affirmed by Jayawant, the examiner has a reasonable basis to believe that the claimed "sodium carbonate-hydrogen peroxide adduct" has been met by Baeck et al. Claims 1-15 are anticipated.

Applicant's arguments filed December 22, 2009 have been fully considered but they are not persuasive. Applicants argue that Baeck et al. are silent on the "sodium carbonate-hydrogen peroxide adduct" being claimed. However, Baeck et al. (page 4, line 42) clearly indicate that sodium is the alkali-metal. Since sodium percarbonate is basically same as (or considered as) an adduct of sodium carbonate-hydrogen peroxide which is affirmed by Jayawant (col. 3, line 25-51), the examiner has a reasonable basis to believe that the claimed "sodium carbonate-hydrogen peroxide adduct" has been met by Baeck et al.

The reaction between sodium carbonate and hydro- 25
gen peroxide forms a perhydrate, that is, a compound
with hydrogen peroxide of crystallization. This sodium
carbonate perhydrate theoretically contains 1.5 moles
of hydrogen peroxide for every mole of sodium carbon-
ate. H_2O_2 can be added to sodium carbonate in any pro- 30
portion but the maximum amount of hydrogen perox-
ide in a stable solid product will not exceed the stoi-
chiometric proportion. Although not commercially de-
sirable, it is possible to make sodium carbonate perhy-
drates containing less H_2O_2 . For example, if a reaction 35
between less than 1.5 moles of hydrogen peroxide is
carried out by the process of this invention, then solid
adducts of hydrogen peroxide and sodium carbonate
containing from about 1 percent to about 30 percent
hydrogen peroxide can be formed. The theoretical 40
amount of active oxygen present in a compound cor-
responding to the formula $Na_2CO_3 \cdot 1.5H_2O_2$ is 15.28 per-
cent, which corresponds to 32.47 percent H_2O_2 of crys-
tallization. In the dry route of this invention, any de- 45
sired amount up to the theoretical maximum of active
oxygen can be incorporated in the final product. In ad-
dition, sodium bicarbonate, $NaHCO_3$, reacts with hy-
drogen peroxide to form sodium percarbonate. This
means that any sodium bicarbonate present would be 50
detrimental to the reaction efficiency.

Applicants argue that Baech et al. teach a fatty acid, but fail to teach a composition comprising a fatty acid salt, applicants fail to recognize that the surfactants disclosed in composition II of the table of page 7-8 of Baech et al. are the preferred embodiment. However, according to Baech et al. (page 3, line 38-39), Baech et al. clearly teach that common sodium and potassium coconut or tallow soap (sodium or potassium tallowate, a fatty acid salt) can also be used. In view of such teachings and in view that applicants' inventions are primarily based on the composition itself, the examiner has a reasonable basis to believe that the claimed fatty acid with sodium-hydrogen peroxide combination is anticipated. Regarding the argued unexpected results filed in the Affidavits of April 27, 2009, applicants must recognize that unexpected

results can not overcome an anticipation rejection, where the claimed adduct of sodium carbonate-hydrogen peroxide has been taught in Baech et al.

4. Claims 1, 2, 5, 6, 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Baker et al. (US 2002/0128165) for the reasons adequately set forth from paragraph 5 of the office action of August 20, 2009, as affirmed by Jayawant (US 3,860,694).

Baker et al. (page 11-13, Composition I) disclose a composition that meets all the features of claims 1, 2, 5, 6, 7. Regarding the method of claims 6, 7, Baker et al. (page 1, 0014) clearly teach using the disclosed composition for use in automatic laundry or for washing fabrics which are inherently fibrous materials. Claims 1, 2, 5, 6, 7 are anticipated.

Regarding the claimed "sodium carbonate-hydrogen peroxide adduct", Baker et al. (page 3, 0051) disclose it is suitable to include alkali-metal percarbonate into the disclosed composition. Further, Baker et al. (page 3, 0051) clearly indicate that sodium is the alkali-metal. Since sodium percarbonate is basically same as (or considered as) an adduct of sodium carbonate-hydrogen peroxide which is affirmed by Jayawant (col. 3, line 25-51), the examiner has a reasonable basis to believe that the claimed "sodium carbonate-hydrogen peroxide adduct" has been met by Baker et al. Claims 1, 2, 5, 6, 7 are anticipated.

Applicant's arguments filed December 22, 2009 have been fully considered but they are not persuasive. Applicants argue that Baker et al. are silent on the "sodium carbonate-hydrogen peroxide adduct" being claimed. However, Baker et al. (page 3,

0051) clearly indicate that sodium is the alkali-metal. Since sodium percarbonate is basically same as (or considered as) an adduct of sodium carbonate-hydrogen peroxide which is affirmed by Jayawant (col. 3, line 25-51), the examiner has a reasonable basis to believe that the claimed "sodium carbonate-hydrogen peroxide adduct" has been met by Baker et al.

The reaction between sodium carbonate and hydro- 25
gen peroxide forms a perhydrate, that is, a compound
with hydrogen peroxide of crystallization. This sodium
carbonate perhydrate theoretically contains 1.5 moles
of hydrogen peroxide for every mole of sodium carbon- 30
ate. H_2O_2 can be added to sodium carbonate in any pro-
portion but the maximum amount of hydrogen peroxide
in a stable solid product will not exceed the stoi-
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sirable, it is possible to make sodium carbonate perhy- 35
drates containing less H_2O_2 . For example, if a reaction
between less than 1.5 moles of hydrogen peroxide is
carried out by the process of this invention, then solid
adducts of hydrogen peroxide and sodium carbonate
containing from about 1 percent to about 30 percent 40
hydrogen peroxide can be formed. The theoretical
amount of active oxygen present in a compound corre-
sponding to the formula $Na_2CO_3 \cdot 1.5H_2O_2$ is 15.28 per-
cent, which corresponds to 32.47 percent H_2O_2 of crys-
tallization. In the dry route of this invention, any de- 45
sired amount up to the theoretical maximum of active
oxygen can be incorporated in the final product. In ad-
dition, sodium bicarbonate, $NaHCO_3$, reacts with hy-
drogen peroxide to form sodium percarbonate. This
means that any sodium bicarbonate present would be 50
detrimental to the reaction efficiency.

Regarding applicants' argument that Baker et al. fail to teach the claimed fatty acid salt, applicants fail to recognize that Baker et al. (page 12, Table 1, composition H) clearly teach 0.3 of soap, where Baker et al. (page 10, 00176, table of abbreviations) clearly indicate that soap is sodium salt of tallow and coconut fatty acid.

Regarding the argued unexpected results filed in the Affidavits of April 27, 2009, applicants must recognize that unexpected results can not overcome an anticipation rejection, where the claimed adduct of sodium carbonate-hydrogen peroxide has been taught in Baker et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM K. CHEUNG whose telephone number is (571)272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/William K Cheung/
Primary Examiner, Art Unit 1796

William K. Cheung, Ph. D.
Primary Examiner
January 19, 2010